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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------|---------------------|------------------|
| 09/806,800 | 06/25/2001 | Adriaan Retief Swanepoel | 0182.00001 | 6013 |

7590 08/23/2004
Gerald E McGlynn III
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EXAMINER

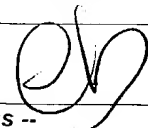
BALSIS, SHAY L

ART UNIT PAPER NUMBER

1744

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------------|---|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/806,800 | SWANEPOEL, ADRIAAN RETIEF | |
| | Examiner | Art Unit |  |
| | Shay L Balsis | 1744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant does not have support for the range $S=0.15*L$ to $S=0.35*L$. The specification only discloses the range limitation of $S=.01*L$ to $S=0.35*L$.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Quinlan et al.

“Quinlan” (USPN 3780395).

Quinlan teaches a wiper, which includes an elongate, flexible curved backbone (21).

There is a force-applying member (38) connected to the center backbone at two spaced apart points (42). By observing the figures it is clear that the spacing between the points is between $S_1=0.15*L$ and $S_2=0.35*L$ where L is the length of the backbone.

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Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Quinlan et al.

“*Quinlan*” (USPN 33751754).

Quinlan teaches a wiper, which includes an elongate, flexible curved backbone (16).

There is a force-applying member (13) connected to the center backbone at two spaced apart points (25). By observing the figures it is clear that the spacing between the points is between $S_1=0.15*L$ and $S_2=0.35*L$ where L is the length of the backbone.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan et al. “*Quinlan*” (USPN ‘395) in view of Swanepoel (USPN 5485650).

Quinlan teaches a wiper, which includes an elongate, flexible curved backbone (21).

There is a force-applying member (38) connected to the center backbone at two spaced apart points (42).

By observing the figures it is clear that the spacing between the points is between $S_1=0.1*L$ and $S_2=0.35*L$ where L is the length of the backbone and the ratio of the spacing distance between the points and the total length ($R=S/L$) is between 0.1 and 0.35.

The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a

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constant thickness and width along its length. The backbone also has a free form curvature as well as a compound curvature when in use.

Quinlan teaches all the essential elements of the claimed invention however fails to teach that the backbone is made of a single, unitary beam and that the backbone has a varying width and thickness along its length. Swanepoel teaches a wiper blade made of a single, unitary resiliently flexible beam. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Quinlan's backbone from a single, unitary beam, as taught by Swanepoel, since it is easier to manufacture. Making the backbone a single, integral unitary beam is a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Larson*, 340 F.2d 965, 967, 144 USPQ 23, 26 (CCPA 1952).

Additionally, Swanepoel teaches a wiper with an elongated curved backbone with a backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, line 36-37). It would have been obvious to have the backbone of Quinlan's wipers vary in thickness and width along its length. Further, one of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of the Quinlan vary to what is desired or required, including as claimed to optimize performance and life of the wiper.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan et al. "*Quinlan*" (USPN '754) in view of Swanepoel (USPN 5485650).

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Quinlan teaches a wiper, which includes an elongate, flexible curved backbone (16).

There is a force-applying member (13) connected to the center backbone at two spaced apart points (25).

By observing the figures it is clear that the spacing distance, S , between the points is between $S_1=0.1*L$ and $S_2=0.35*L$ where L is the length of the backbone and the ratio of the spacing distance between the points and the total length ($R=S/L$) is between 0.1 and 0.35. The preferred spacing distance S_p between the spaced apart points is about $S_p=0.363*L-0.000146*L^2$. The preferred ratio R_p is about $R_p=0.363-0.000146*L$.

The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a constant thickness and width along its length. The backbone also has a free form curvature as well as a compound curvature when in use.

Quinlan teaches all the essential elements of the claimed invention however fails to teach that the backbone is made of a single, unitary beam and that the backbone has a varying width and thickness along its length. Swanepoel teaches a wiper blade made of a single, unitary resiliently flexible beam. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Quinlan's backbone from a single, unitary beam, as taught by Swanepoel, since it is easier to manufacture. Making the backbone a single, integral unitary beam is a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Larson*, 340 F.2d 965, 967, 144 USPQ 23, 26 (CCPA 1952).

Additionally, Swanepoel teaches a wiper with an elongated curved backbone with a backbone that tapers uniformly in both thickness and width in a straight line manner from its

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center to its tips (col. 3, line 36-37). It would have been obvious to have the backbone of Quinlan's wipers vary in thickness and width along its length. Further, one of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of the Quinlan vary to what is desired or required, including as claimed to optimize performance and life of the wiper.

Claim 1-6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanepoel ('650) in view of Quinlan ('395).

Swanepoel teaches a windscreen wiper with an elongated curved backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, lines 36-37). The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use. Swanepoel teaches all the essential elements of the claimed invention however fails to teach a force applying member which is connected to the backbone at two spaced apart points. Swanepoel teaches a single centrally located connector for releasably connecting the wiper to a wiper arm.

Quinlan teaches a wiper comprising a force-applying member (38) connected to the center backbone at two spaced apart points (42). By observing the figures it is clear that the spacing between the points is between $S_1=0.1*L$ and $S_2=0.35*L$ where L is the length of the backbone and the ratio of the spacing distance between the points and the total length ($R=S/L$) is between 0.1 and 0.35. The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. It would have been obvious at the time the invention was made to use the connector as taught by Quinlan

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on the wiper blade of Swanepoel since the it is more versatile since Quinlan connector comprises a quick disconnect from the backbone and also from the wiper arm. Additionally, using the connection of Quinlan with increase strength of the beam. A force-applying member with two connection points instead of one will provide a sturdier beam. Substituting the connector of Swanepoel for the connector of Quinlan would allow for increased industrial applications.

Claim 1-6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanepoel ('650) in view of Quinlan ('754).

Swanepoel teaches a windscreen wiper with an elongated curved backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, lines 36-37). The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use. Swanepoel teaches all the essential elements of the claimed invention however fails to teach a force applying member which is connected to the backbone at two spaced apart points. Swanepoel teaches a single centrally located connector for releasably connecting the wiper to a wiper arm.

Quinlan teaches a wiper comprising a force-applying member (38) connected to the center backbone at two spaced apart points (42). By observing the figures it is clear that the spacing distance, S , between the points is between $S_1=0.1*L$ and $S_2=0.35*L$ where L is the length of the backbone and the ratio of the spacing distance between the points and the total length ($R=S/L$) is between 0.1 and 0.35. The preferred spacing distance S_p between the spaced apart points is about $S_p=0.363*L-0.000146*L^2$. The preferred ratio R_p is about $R_p=0.363-0.000146*L$. The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. It would have been

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obvious at the time the invention was made to use the connector as taught by Quinlan on the wiper blade of Swanepoel since it is more versatile since Quinlan connector comprises a quick disconnect from the backbone and also from the wiper arm. Additionally, using the connection of Quinlan will increase strength of the beam. A force-applying member with two connection points instead of one will provide a sturdier beam. Substituting the connector of Swanepoel for the connector of Quinlan would allow for increased industrial applications.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb
8/11/04


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